

# BUCEROS

ENVIS Centre on AVIAN ECOLOGY

Vol. 22, No. 2, 2017





## ABOUT ENVIS

ENVIS (Environmental Information System) is a network of subject-specific centres located in various institutions throughout India. The focal point of the present 66 ENVIS centres in India is at the Ministry of Environment, Forest and Climate Change, New Delhi, which further serves as the Regional Service Centre (RSC) for INFOTERRA, the global information network of the United Nations Environment Programme (UNEP) to cater to environment information needs in the South Asian sub-region. The primary objective of all ENVIS centres is to collect, collate, store and disseminate environment related information to various user groups, including researchers, policy planners, and decision makers.

The ENVIS Centre at the Bombay Natural History Society was set up in June 1996 to serve as a source of information on Avian Ecology.

### Objectives of the ENVIS Centre at BNHS

- ✍ To create a bibliographic database of published literature related to avian ecology study
- ✍ To publish and distribute BUCEROS newsletter on avian ecology to its members
- ✍ To create and upload databases on avian ecology on ENVIS website [www.bnhsenviis.nic.in](http://www.bnhsenviis.nic.in)
- ✍ To reply to queries related to birds



**BUCEROS**  
**ENVIS Newsletter**  
**Avian Ecology**  
**Vol. 22, No. 2, 2017**

**ENVIS TEAM AT THE BNHS**

**Project Coordinator**  
Dr. Girish Jathar

**Programme Officer**  
Sagar B. Satpute

**Information Officer**  
Sushmita Karmakar

**IT Officer**  
Heta N. Akolkar

**Data Entry Operator**  
Kritalee D. Chindarkar

**EDITORIAL TEAM**  
Vibhuti Dedhia  
M.R. Maithreyi

**Layout**  
V. Gopi Naidu

**Cover**  
Satyr Tragopan *Tragopan satyra*  
by Dr. Rajat Bhargava

© ENVIS-BNHS 2017: All rights reserved. This publication shall not be reproduced either in full or in part in any form, either in print or electronic or any other medium, without the prior written permission of the Bombay Natural History Society.

Bombay Natural History Society,  
Hornbill House, S.B. Singh Road,  
Mumbai 400 001, Maharashtra, India.  
Tel.: (91-22) 2282 1811  
Fax: (91-22) 2283 7615  
E-mail: bnhs@envis.nic.in  
Website: www.bnhsenvis.nic.in

## CONTENTS

### ENVIS NEWS

Celebration of Ozone Day 2017 ..... 5

### ORGANIZATIONAL NEWS

Climate Change looms over Himalaya ..... 5

### NATIONAL NEWS

Three rare birds spotted near Sultanpur National Park ..... 6

Fewer birds at Okhla this year due to gate repairs ..... 7

More than three lakh migratory birds  
arrive in Kashmir Valley ..... 8

Vigil stepped-up to protect  
migratory birds in Bijnor ..... 9

### INTERNATIONAL NEWS

New bird species evolved in just two generations ..... 10

### ARTICLES

1. Birding in Chorla ..... 11  
Gargi Vijayaraghavan

2. Shadow of the Satyr:  
An encounter with the elusive Satyr Tragopan ..... 13  
Atharva Singh

3. Water bathing ..... 16  
Ajit Hota

**ABSTRACTS** ..... 18

## EDITORIAL

Existing natural ecosystems and organisms are a byproduct of historical changes in climate, and extinctions are part of planet earth's history. However, extinction has accelerated especially since the last century, due to anthropogenic activities. Climate change, this time human-induced, is proving to be a daunting challenge for humanity, as well as natural ecosystems. The rate of extinction of species has quadrupled and a possible shift in climate will have an impact on ecosystems.

Birds being most sensitive to climate are one of the best indicators to assess variations in the changing weather pattern and ultimately in assessing climatic changes. Birds have been dwelling on Earth for about 150 million years and have witnessed major geological as well as historical changes in climate. They have surpassed all the changes till date, albeit with turnover of species. But, the impending danger of human-induced climate change is proving to be of great concern. If climate change was the only challenge faced by a bird species, it could have adapted to the new conditions and survived with the existing population variability and genetic information of the past population. However, man-made challenges in addition to natural challenges, such as habitat destruction, release of toxic chemicals into the environment, besides other factors interfere with the metabolic rates of birds. Changes in phenology of natural events of birds have been documented. Temperature based events, like migration or reproduction can get preponed or postponed. Birds and the species with which they interact (including their prey, predators, and competitors) are not equally responsive to climate change, and therefore, there is a potential for imbalance between these key relationships impacting food availability. Additionally, alteration in habitats, warmer temperature, and changed weather patterns may alter reproductive strategies of bird species.

Many tropical bird species could shift their breeding seasons in response to changes in temperature and rainfall regimes. In Sikkim, it was observed that some bird species were breeding in the latter half of their breeding season, besides elevation range shifts in the lower as well as upper limits (Ali 1962). For example, the Ibisbill *Ibidorhyncha struthersii*, which was historically recorded as low as 300 m, is now recorded at 3,300 m and above. Besides, increasing temperatures have led mosquitoes to move further up, threatening birds at higher altitudes with the risk of avian malaria. A recent multi-year study across four Indian states showed that altered cropping and rainfall patterns are responsible for unseasonal nesting in Sarus crane *Antigone antigone*, a globally vulnerable species.

To curb this problem, research based on observations of impact of climate change on birds is being pursued in India. A thorough understanding of the ways in which climate change can impact birds is essential in predicting extinction risk and in developing possible mitigation strategies. Thus, in a way, for birds and all of us, climate change is the new escapee from the "Pandora's Box".

This new issue of BUCEROS has put forward a humble effort to cater to the varied needs of our readers. Along with the news on climate change affecting birds to the evolution of a new bird species, two new articles, one relating to the birding activity and the other a wild encounter, adorn this issue. This issue is a small addition to the information pool of Avian Ecology.

Wishing all the readers happy reading.

### References

Ali, S., (1962): The Bombay Natural History Society. *World Health Organisation Bird Migration Study Project. J. Bombay Nat. Hist. Soc.* **59**(1): 100–130.

**Sushmita Karmakar**

**Girish Jathar**



## Celebration of Ozone Day 2017



World Ozone Day celebration by ENVIS BNHS at Hornbill House

World Ozone Day was celebrated by the BNHS ENVIS centre on September 16, 2017, at Hornbill House, Mumbai. A presentation on the Montreal Protocol and Ozone Depletion, and a short introduction of the ENVIS scheme and its work was given by Ms. Tejashree Nakashe, IT Assistant, ENVIS Centre, to the students of Maharshi Dayanand College, Parel. The presentation was followed by the screening of a short film 'Ozzy Ozone' provided by the MoEF & CC.

An extended interactive session on Ozone and depletion of the Ozone layer encouraged discussion on ways to control the problem. The students were also informed regarding India's achievements in this matter. A poster on World Ozone Day and a copy of the Buceros newsletter were distributed to the students for display in their college to spread awareness about the depleting ozone layer. ■

## Organizational News

### Climate Change looms over Himalaya

PUNE: Pheasants and Finches – two of the flagship Himalayan species – seem to be reeling under the threat of climate change, according to the preliminary findings of a survey by BNHS.

BNHS has launched a program focusing on Pheasants and Finches to study climate change in the Himalaya. Until now, the team has undertaken surveys to understand distribution and status of Pheasants in four districts of Sikkim and two of West Bengal. One of the important observations was sightings of Kalij Pheasants *Lophura leucomelanos* in the Kitam Bird Sanctuary, Sikkim, where it was found in abundance about 10-15 years ago. The locals

informed that the population of Kalij Pheasants had declined significantly in the Sanctuary. "These observations can be valuable in the context of climate change in the Himalaya. BNHS intends to correlate presence of bird species and changes in the ecosystem to validate these observations of locals under this study," noted Deepak Apte, Director, BNHS. Based on these observations, mitigation efforts will be undertaken involving communities as the guiding force. ■

**Source:** <https://timesofindia.indiatimes.com/city/pune/climate-change-looms-over-himalayas/articleshow/60389067.cms>

## Three rare birds spotted near Sultanpur National Park

**G**URGAON: Three rarely seen bird species – Merlin *Falco columbarius*, White-browed Bushchat *Saxicola macrorhynchus*, and Short-eared Owl *Asio flammeus* – were spotted at Sultanpur flats, a populated area near Sultanpur National Park, by birders in the last week of October 2017.

According to birders, the White-browed Bushchat or Stoliczka's Bushchat and Merlin have rarely been spotted in the NCR region.

Pankaj Gupta from Delhi Bird Foundation told TOI, “What makes White-browed Bushchat easily identifiable is its peculiar behaviour; it is similar to a belly dance. I was lucky to spot the species, as well as videograph its dance. The bird performs ‘puff and roll’ by suddenly puffing up its belly and shaking sideways. It was an amazing experience.” Talking about the other two species – Merlin and Short-eared Owl, Gupta said, “It took us some time to confirm the sighting of the Merlin, as it is very rarely seen. However, after looking at photos provided by a few birders, we confirmed that the spotted bird was indeed a Merlin. The Short-eared Owl has been spotted by a couple of birders, including myself, in the Sultanpur flats.”

Activists raised the need to protect at least a five-kilometre buffer zone around the Sultanpur National Park. “While many species of ducks choose Sultanpur NP due to presence of a waterbody, many bird species remain in the grassland around the Park. We have been spotting many avian species, including these three rarely seen ones, in Sultanpur flats,” said Gupta.

“The spotting of rare species has given a new hope and also a reason to conserve the area around Sultanpur National Park,” said Sharma. Listed as a vulnerable species, the White-browed Bushchat is a desert bird and breeds in Rajasthan. It is dependent on birds and grasses such as *Saccharum spontaneum* and *Saccharum munja*.

Merlin and Short-eared Owl are migratory birds from Europe. While these species have been marked as Least Concern by IUCN (International Union for Conservation of Nature), they are sighted very rarely in India. ■



SHANTANU KUVESKAR

**Short-eared Owl**



DEVVRATSIH MORI

**Merlin**

**Source:** <https://timesofindia.indiatimes.com/city/gurgaon/three-rare-birds-spotted-near-sultanpurpark/articleshow/61427670.cms>



## Fewer birds at Okhla this year due to gate repairs

SANJEEV DHAR



Purple Heron

RAJAT BHARGAVA



Spot-billed Duck

AKHILAN (Wikipedia)



Okhla Bird Sanctuary entrance

**N**OIDA: A month of repair work of the Okhla Barrage gates has taken its toll on the numbers of migratory birds visiting the Okhla Bird Sanctuary. Migratory birds flock to the Sanctuary from Eurasian countries October onwards in search of food and to escape the harsh winter in their habitat. In 2017, however, only a small number of late comers arrived over the last week of November, after the repair work was completed.

Commenting on the loss for bird enthusiasts who visit the Sanctuary to spot and photograph birds, H.V. Girish, District Forest Officer, Gautam Budh Nagar said “Repairs of the gates were long overdue, and this round of repairs is expected to hold good for the next 30–40 years.” Out of the barrage’s 27 gates, 18 were repaired.

“It is true that we have lost the migrants who flock here October onwards, but with water levels restored, some birds have returned to the Sanctuary over the last one week. The water loss has led to fewer fish, which hampered the gathering of migrants here”, according to Girish.

If the birds return to the Sanctuary over December and January, birdwatchers can expect to spot, among other varieties, the Indian Peafowl *Pavo cristatus*, Green Bee-eater *Merops orientalis*, Spot-billed Duck *Anas poecilorhyncha*, Yellow-footed Green-Pigeon *Treron phoenicopterus*, Purple Heron *Ardea purpurea*, Shikra *Accipiter badius* and Western Marsh Harrier *Circus aeruginosus*. ■

**Source:** <https://timesofindia.indiatimes.com/city/noida/fewer-birds-at-okhla-this-year-due-to-gaterepairs/articleshowprint/61841550.cms>



## More than 3 lakh migratory birds arrive in Kashmir Valley



Hokersar wetland

BILAL BAHADUR

**S**rinagar: With the onset of winter, over three lakh migratory birds from Central Asia and Southern Europe have arrived at more than 400 water bodies in the Kashmir Valley.

Thousands of Mallards *Anas platyrhynchos*, Common Mergansers *Mergus merganser*, Northern Pintails *Anas acuta*, Common Pochards *Aythya ferina*, Red-crested Pochards *Netta rufina*, Ruddy Shelducks *Tadorna ferruginea*, Northern Shovelers *Spatula clypeata*, Common Teals *Anas crecca*, Eurasian Wigeons *Mareca penelope*, Tufted Ducks *Aythya fuligula*, Gadwalls *Mareca strepera*, Garganeys *Spatula querquedula*, and Greylag Geese *Anser anser* have come to Kashmir in the first batch of migration this season.

Wildlife Warden of Jammu & Kashmir wildlife protection department, Abdul Rauf Zargar, told TOI that the birds mainly throng the wetlands of Hokersar in Srinagar district, Shallabugh in Ganderbal district, Sopore and Hygam in Baramulla district, and Pampore in Pulwama

district. While most birds migrate to avoid freezing to death in their native habitats, the Mallards arrive to mate as well. The birds fly to Kashmir Valley via the Central Asian Flyway, he said, adding, "This is the initial stage of the migratory season. The number of birds will increase by February." An official posted at the Pampore wetlands said "The frequent terror attacks in south Kashmir have scared the birds, which is why they avoid flocking to Chatlum, Kurchi, and Kresh Khori wetlands in the region." The Hokersar wetlands – 10 km from Srinagar city – however, serve as a safe haven for them. Every year, thousands of waterfowls choose this location to seek refuge during the winter months.

Rauf said the department is taking all precautions to protect the birds from poaching. Though the practice of bird hunting has diminished over a period of time due to the department's efforts, potential threats still exist. In order to thwart such attempts, the Wildlife department has set up squads to keep an eye on suspicious movement



in the area. “We’ve recovered several hunter guns and poaching equipment. The poachers mainly strike during night time, but the rate isn’t alarming,” said Rauf. Some survey reports by the state government, however, reveal that the number of migratory birds arriving in Kashmir has declined in the last two decades. Officials attribute this fall to rapid urbanization and accumulation of silt, causing the shrinkage of wetlands.

The Asian Waterbird Census of 2016 – conducted in 13 wetlands across Kashmir – recorded over five lakh birds of 33 species, with more than 94% of them in two wetlands of Hokersar and Shalabugh. Earlier, the Bombay Natural

History Society’s annual Bird Migration Project in 1989 had recorded 64 species in the Valley wetlands.

Rauf blamed the rapid conversion of paddy fields and orchards into housing colonies as the reason behind depletion of water bodies. “Only two decades ago, there were vast expanses of marshlands across the Valley. These were later filled, which is why birds stopped visiting. Their chirping was replaced with complete silence,” he added.

The wildlife department is striving to protect and revive waterbodies and prevent their encroachment, Rauf said. ■

**Source:** <https://timesofindia.indiatimes.com/home/environment/flora-fauna/more-than-3-lakh-migratorybirds-arrive-in-kashmir-valley/articleshowprint/61839073.cms>

## Vigil stepped-up to protect migratory birds in Bijnor

**B**IJNOR: The first week of October had seen hundreds of migratory birds coming to Bijnor from different countries of the world to roost for winter. Many birds could be spotted in the lakes and rivers in the district. River Ganga, Peeli dam, Harevali Lake, Sherkot and Afzalgarh area are some of the sites where migratory birds flock to for the winter. Some of the birds that frequent these areas are Northern Shoveler *Spatula clypeata*, Northern Pintail *Anas acuta*, Gadwall *Mareca strepera*, Painted Stork *Mycteria leucorhynchos*, Woolly-necked Stork *Ciconia episcopus*, Common teal *Anas crecca*, Indian Shag *Phalacrocorax fuscicollis*, Indian Spot-billed Duck *Anas peocilorhynchos*, Asian Openbill Stork *Anastomus oscitans*, Ruddy Shelduck *Tadorna ferruginea* and various cranes, cormorants, geese, ibises and Shelducks.

According to the officials, “By the beginning of October, migratory birds from Siberia, China, Tibet, Mongolia, Romania and many other European countries start arriving here in large



Bijnor water body

RAJAT BHARGAVA

numbers. The winged guests stay here till March and during this time, some also lay eggs here.” For bird watchers, it is a treat to see so many different birds.

With the arrival of these migratory birds, the forest department have had deputed staff to the places where the birds are found. The forest personnel are equipped with cameras to keep a tab on the types of birds that flock here. According to the Divisional Forest Officer M Semmaran, “The wildlife-rich Bijnor district is now

eying migratory birds, which cover thousands of kilometers to come and rest in the district.

In this context, several meetings have been held at villages on the banks of the Ganga to raise awareness about the birds among the locals.” M. Semmaran had added that they have asked the villagers living near the bird spots to inform regarding any dead avian. According to him, it was mandatory to keep a track of the migratory birds, as they can be the carrier of the bird flu virus. ■

**Source:** <https://timesofindia.indiatimes.com/city/meerut/vigil-stepped-up-to-protect-migratory-birds-inbijnor/articleshowprint/61840095.cms>

### New bird species evolved in just two generations

WASHINGTON: A new bird species belonging to the Big Bird lineage, which today consists of roughly 30 individuals, emerged on the Galapagos Islands in just two generations, according to a study. Researchers previously assumed that the formation of a new species took a very long time, but in the Big Bird lineage it happened very soon.

The new species of Darwin's Finch was observed during the field work carried out over the last four decades by Barbara Rosemary Grant and Peter Raymond Grant, two scientists from the Princeton University in the US, on the small island of Daphne Major, one of the Galapagos Islands. All 18 species of Darwin's Finches were derived from a single ancestral species that colonized the Galapagos about one to two million years ago. In 1981, researchers noticed the newcomer, a male that sang an unusual song and was much larger in body and beak size than the three resident species of birds on the island. "We didn't see him fly in from over the sea, but we noticed him shortly after he arrived. He was so different from the other birds that we knew he did not hatch from an egg on Daphne Major," said Peter Grant. They took a blood sample and released the bird, which later bred with a resident medium ground finch of the species *Geospiza fortis*, initiating a new lineage. This gave rise to a new species that today consists of roughly 30 individuals, according to the study published in the journal Science. The team followed the new "Big Bird lineage" for six generations, taking blood samples for use in genetic analysis.



Medium Ground-finch *Geospiza fortis*

B.R. GRANT



Big Bird

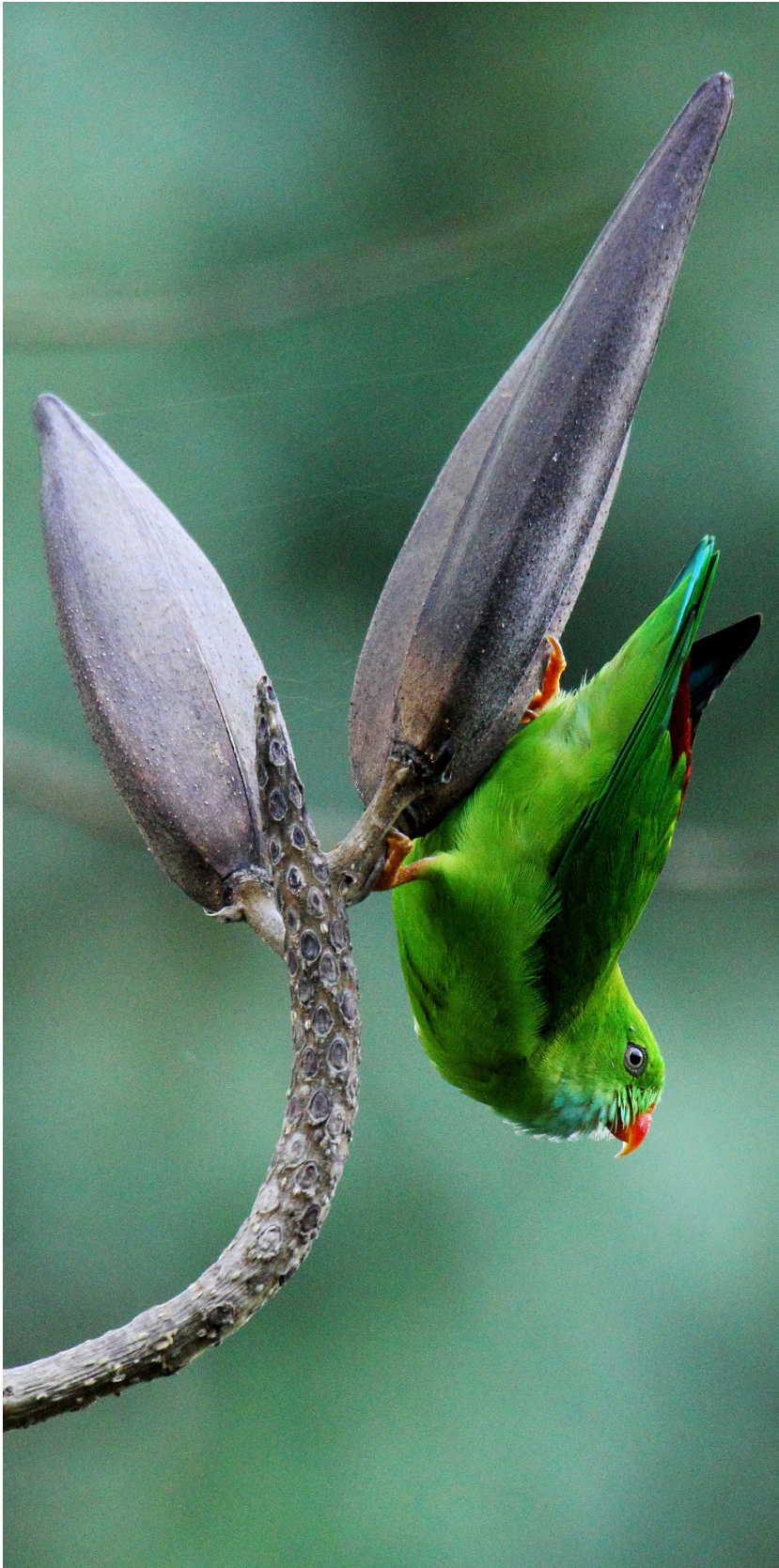
B.R. GRANT

Scientists from Uppsala University analysed DNA collected from the parent birds and their offspring over the years. "The novelty of this study is that we can follow the emergence of new species in the wild," said Barbara Rosemary Grant. "Through our work on Daphne Major, we were able to

observe the pairing up of two birds from different species and monitor them to see how speciation occurred," she said. The breeding of two distinct parent species gave rise to a new lineage (termed "Big Bird" by the researchers). This lineage has been determined to be a new species. ■

**Source:** <https://timesofindia.indiatimes.com/home/environment/flora-fauna/new-bird-species-evolved-in-just-two-generations-study/articleshow/61795862.cms>





HARSHITH J.V.

Vernal Hanging-parrot

# Birding in Chorla

By Gargi Vijayaraghavan

One of the four biodiversity hotspots in our country, the Western Ghats boasts of some rare and endemic fauna and flora. These Ghats run parallel to the west coast of India and are declared as a World Heritage Site. Chorla lies within these Ghats, located at the intersection of the borders of Goa, Karnataka, and Maharashtra. A small walk through the moist mixed deciduous forest of Chorla Ghats was a memorable experience as the biodiversity there left me speechless. The forest provides shelter to migrants, as well as to many endemic bird species.

Birding has been my favourite hobby, since childhood, but it was only during my graduation years that I started observing and studying birds carefully. I visited Chorla Ghats during the winter season and the guide told me that it was one of the best times to spot birds.

I was all set with my binoculars and field guide. The first bird I saw was a Puff-throated Babbler *Pellorneum ruficeps*, a small passerine bird foraging by turning the leaf litter to find its prey. This babbler has a distinct call and is not intimidated by the presence of humans around it. I was observing the babbler, when my friend called to check an Indian Paradise-flycatcher *Terpsiphone paradisi* perched high up on a liana.





Orange-headed Thrush

## Birds list of Chorla

Sr. No.	Common Name	Scientific Name
1.	Red Spurfowl	<i>Galloperdix spadicea</i>
2.	Oriental Honey-buzzard	<i>Pernis ptilorhynchus</i>
3.	Vernal Hanging-parrot	<i>Loriculus vernalis</i>
4.	Greater Coucal	<i>Centropus sinensis</i>
5.	Asian Green Bee-eater	<i>Merops orientalis</i>
6.	Great Hornbill	<i>Buceros bicornis</i>
7.	Common Iora	<i>Aegithina tiphia</i>
8.	Black Drongo	<i>Dicrurus macrocercus</i>
9.	Ashy Drongo	<i>Dicrurus leucophaeus</i>
10.	Indian Paradise-flycatcher	<i>Terpsiphone paradisi</i>
11.	Black-naped Monarch	<i>Hypothymis azurea</i>
12.	Wire-tailed Swallow	<i>Hirundo smithii</i>
13.	Flame-throated Bulbul	<i>Pycnonotus gularis</i>
14.	Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>
15.	Red-vented Bulbul	<i>Pycnonotus cafer</i>
16.	Yellow-browed Bulbul	<i>Acritillas indica</i>
17.	Common Tailorbird	<i>Orthotomus sutorius</i>
18.	Greenish Warbler	<i>Phylloscopus trochiloides</i>
19.	Puff-throated Babbler	<i>Pellorneum ruficeps</i>
20.	Dark-fronted Babbler	<i>Rhopocichla atriceps</i>
21.	Malabar Whistling-thrush	<i>Myophonus horsfieldii</i>
22.	Orange-headed Thrush	<i>Geokichla citrina</i>
23.	Indian Blackbird	<i>Turdus simillimus</i>
24.	Oriental Magpie-robin	<i>Copsychus saularis</i>
25.	Blue-capped Rock-thrush	<i>Monticola cinclorhyncha</i>
26.	Asian Brown Flycatcher	<i>Muscicapa dauurica</i>
27.	Red-breasted Flycatcher	<i>Ficedula parva</i>
28.	Tickell's Blue-flycatcher	<i>Cyornis tickelliae</i>
29.	Nilgiri Flowerpecker	<i>Dicaeum concolor</i>
30.	Purple-rumped Sunbird	<i>Leptocoma zeylonica</i>
31.	Crimson-backed Sunbird	<i>Leptocoma minima</i>
32.	Purple Sunbird	<i>Cinnyris asiaticus</i>
33.	Forest Wagtail	<i>Dendronanthus indicus</i>

It was a male with beautiful white plumage and elongated tail feathers swirling around when it flew. Having seen the male, I now wanted to see the female. Just then, I heard something huge fly over. Was that a chopper?

No, it was the Great Hornbill *Buceros bicornis*, a Near Threatened species its population confined to the Western Ghats and the Himalaya, in India. The most prominent feature is the bright yellow and black casque atop its massive bill. The raucous chattering call of the Vernal Hanging-parrot can never be forgotten.

As we proceeded further, we saw some Flame-throated Bulbul *Pycnonotus gularis* perched on a Rangoon Creeper Vine (endemic to Western Ghats and State Bird of Goa). They were continuously being disturbed by the Yellow-browed Bulbul *Acritillas indica*. A pair of Vernal Hanging-parrot *Loriculus vernalis* was hanging on a tree opposite the wine. As the name suggests, it hangs upside down and feed on fruits. The male has a distinct red rump and blue patch near the throat.

Chorla has three eco-resorts and efforts are being taken by the locals, as well as some ecologists, to preserve the pristine environment. Locals are friendly and well-informed about the local flora and fauna. These Ghats can continue to boast of their biodiversity only if there is fusion of conservation, research, and local community participation. ■

## REFERENCE

Grimmett, R., C. Inskipp & T. Inskipp (2011) Birds of the Indian Subcontinent. 2nd. Ed. Oxford University Press, India. Pp 528.



# Shadow of the Satyr: An encounter with the elusive Satyr Tragopan

By Atharva Singh

The Himalaya have often been used as a metaphor for the ‘realm of mysticism’ as this is the land of mystical beings such as the Yeti and Dragons. The Himalaya are also home to many rare endemic species, some of which have become globally threatened due to anthropogenic threats such as poaching, wildlife trade, deforestation, and habitat fragmentation due to urbanization. In search of such species, the BNHS Climate Change team set off to carry out a study on a rare and near threatened bird, the Satyr Tragopan *Tragopan satyra* in the moist temperate forest of Singalila National Park Eastern Himalaya through a project funded by Oracle and facilitated by CAF India.

Satyr Tragopan belongs to the family of Phasianidae and is distributed in the Himalayan region from Uttarakhand east to Arunachal and in Tibet. This charismatic bird prefers habitat from an altitudinal range of 2,200 m to 4,250 m with dense undergrowth, scrub and bamboo clumps. Singalila National Park (SNP) is a north-south ridge running from an altitude gradient of 2,900 m to 3,636 m in the Himalayan region of the northwestern part of West Bengal. The Park shares its border with the eastern middle mountain region of Nepal in the west (hence making it a transboundary protected area) and with the southwestern part of Sikkim in the north. It holds a mix of Himalayan and Indo-Burmese species.

The Park is divided into two ranges - South Range and North Range. The hamlets of Tumling and Phalut lie at



RAJAT BHARGAVA

Singalila National Park (Habitat)





RAJAT BHARGAVA

**Satyr Tragopan (Female)**



RAJAT BHARGAVA

**Satyr Tragopan (Male)**

the extreme tips of the southern and northern stretches of the Park. The forest of Singalila was leased out to the British government in 1882 by the Sikkimese King, and in 1986, was declared a national park after it became part of the Darjeeling district of West Bengal.

In the spring of April 2016, we took a bumpy ride towards Maney Bhanjyang, entry point of SNP, which is 24 km from Darjeeling. Our first halt was Tumling, a small settlement in the Park roughly 11 km away from Maney Bhanjyang. Tumling was adorned with different shades of red

rhododendrons that attracted a myriad of beautiful Himalayan bird species. Just the perfect season to be in the Park! However, searching for our target species in the 78.6 sq. km. area with an undulating terrain of thick forest and without much accessibility except for the 55 km road leading to



Phalut, was as difficult as finding a needle in a hay stack, more so since it is a rare and shy species.

Luckily with the help of secondary data, we were able to narrow down our search to Gairibas, another settlement 9 km away from Tumling, suggested to have a potential habitat for the Satyr Tragopan. Incidentally, Gairibas translates to “deep bamboo” (Gairi = deep and bas = bamboo) in Nepali, perhaps describing the potential habitat of the Satyr Tragopan. Gairibas is a small forest beat set under the South range of SNP, located at an altitude of 2,625 m and home to endangered species such as the Red Panda *Ailurus fulgens*, Asiatic Black Bear *Ursus thibetanus*, Himalayan Serow *Capricornis thar* and Himalayan Goral *Naemorhedus goral*.

As we descended towards Gairibas, we were able to see a steep hillside with scrubby under growth and Ringal Bamboo dominated by Oak forest. The thick canopy sieved the sunlight into beams, making entry into the forest dramatic. As described by Dr. Sálim Ali in his book, ‘Birds of Sikkim’ during his visit to Sikkim in 1896, the habitat of the Satyr Tragopan became clear to us in Gairibas. Now that we were in the right habitat and knew exactly where to search, the stakes were high if we found the bird.

Satyr Tragopan, locally called “Monal” in Nepali was a bird known to most of the locals in Gairibas. What was really encouraging was the confidence of the local people who knew and interpreted the call of *monal* to that of a weeping child confirmed the presence of this species in fair numbers in this area. The good news was that the locals could occasionally hear the calls of the *monal* early in the morning and likened its call to that of a weeping child.

Next day, we were geared up before sunrise and the team was all set to be

in the field to track the Satyr Tragopan. We narrowed on a vantage point that looked like the perfect spot for the bird anticipating its movement through the bamboo forest. The weather was misty and the forest showed its true moist, temperate character with the rustling sounds of dry leaves.

With the increasing daylight, our hopes began to shrink and we decided to take a chance on moving to the next spot that was about to reveal something beyond our expectations. After a few minutes further along the trail, we heard what we thought was a stone rolling down the hill slope and to ascertain the source of the sound, we even held our breath. We decided to slowly head towards the bamboo cover to see if we could get close enough to the site. The closer we approached, the louder the rolling sound became, but this time it was complemented with flapping feathers. We saw two adrenalized Satyr Tragopans too engrossed in their territorial fight to notice our presence.

The Satyr Tragopan is a shy bird; this sighting was the exact opposite. Although, many pheasant species are known to fight to death especially in the presence of the female. Both male tragopans were trying to dominate each other, gasping for a while and clashing against each other using their sharp spurs and claws. The fight became very aggressive and we observed the birds with their inflated blue horns and their beautiful extended royal-blue gular wattle. A prominent and extended gular wattle is generally related to high testosterone and nutrition levels, signifying an individual with healthy genes. The inflated fleshy blue horn in Satyr Tragopan is also the reason why it is sometimes referred as the Crimson-horned pheasant.

Crackling of the dried leaves gave added effect to the fight as the birds clashed together like warriors

in a duel. As the fight continued, the two contenders began to shift up the slope, selecting advantageous positions to inflict wounds on the other. Eventually, they hustled and dissipated out of sight into the dense bamboo forest, leaving behind the fading sound of the rustling leaves and an unforgettable moment.

Our team of four looked at each other and exchanged smiles, as we knew what we had just seen was a rare sight witnessed only by a few. We decided not to follow and left them undisturbed, heading further on our trail with boosted motivation.

Fortunately, it did not end with this as after a few meters from the site, we caught sight of a female Satyr Tragopan running upslope for cover. We assumed her to be the female for whom the two males had been fighting. Next day we headed towards Sandakphu which is located at an altitude of 3,636 m and is the highest point of West Bengal. The stretch of Himalayan mountain range from Mt. Khangchendzonga to Mt. Everest can be beautifully seen from here. It was the perfect day to end our quest for the Satyr Tragopan with the sense of fulfillment and triumph.

In recent years, the population of the Satyr Tragopan is on the decline. The major threats to the species are poaching and the wildlife trade (which have led to the bird's listing in appendix I of CITES), along with habitat destruction due to timber harvesting, forest fire, livestock grazing, urbanization and developmental projects near protected areas. Therefore, it is very important that we secure the habitat of the mesmerizing Satyr Tragopan, which is undergoing rapid degradation and spread extensive awareness to decrease its poaching. Only then would we be able to successfully conserve its decreasing population and save this Himalayan beauty from extinction. ■



Citrine Wagtail taking a bath

# Water Bathing

Text and photographs: Ajit Hota

Most bird species resort to bathing in water if water source is available.

I have observed a Citrine Wagtail *Motacilla citreola* bathing in water at Chilika Lake, Odisha. The lake is a paradise for migratory birds and hosts almost a million migratory birds from many different countries as far as North America, Australia, Mongolia and Siberia. It was a warm afternoon, which probably triggered the need to bathe in water. The Citrine Wagtail selected a shallow area in the lake, and started splashing water over itself until the body was wet enough.

It repeated the activity 2–3 times. As visible in the picture, the act of bathing involves flapping the feathers vigorously in water for a few minutes while dipping the head at times.

I have also witnessed an Indian Skimmer *Rhynchops albicollis* bathing in the Mahanadi River, Mundali region of Odisha state. A very unique feature of this species is its long thick orange bill with a yellow tip, with the upper mandible shorter than the lower mandible. True to its name, the Skimmer skims along the surface of the water as it flies; no sooner does it comes in contact with the prey, than it





#### Indian Skimmer preening

snaps it with its upper mandible, giving little room for escape. The Indian Skimmer has a complex structure of feathers which enables it to fly efficiently. But the feathers require as much cleaning and preening.

It was a hot April noon and the Indian Skimmer opted for a shallow part of the water around a small sand island in the river, away from humans and land predators. The Indian Skimmer walked into the shallow area

from the island and started splashing the water all over its body. It raised some of its feathers letting the water percolate through to the skin and wash away any parasites that may be buried down beneath the feathers. Bird feathers also contain crevices which can accumulate dirt. In the video that I have documented, it can be seen that the bird soaks the beak in water and uses it to clean the inner feathers. After repeating the activity

2–3 times, the Skimmer shook off the excess water and walked away to the sunny sand area where it fluffed its feathers to allow sun rays in. It continued to preen its feathers one by one with its beak, until every single strand had been attended to and placed securely in its place. To watch the Indian Skimmer bathing in water, log on to: [https://www.youtube.com/watch?v=F5\\_j2DmRnE8](https://www.youtube.com/watch?v=F5_j2DmRnE8)

■

## Abstracts

### **Birds of the Kerala Agricultural University campus, Thrissur District, Kerala, India - an update**

**K. Abha Manohar, Arjun Ramachandran, M.S. Syamili, E.R. Sreekumar, Nithin Mohan, J. Anjali, Abinand Reddy, P. O. Nameer**

An updated checklist of the birds of the Kerala Agricultural University main campus is presented here. The current checklist includes 172 species in 60 families and 17 orders. The campus avifauna includes two Western Ghats endemic species and three globally threatened species. The Kerala Agricultural University main campus also supports 11 species of birds included in Schedule I of the Wildlife (Protection) Act, 1972 and 16 species that are listed in Appendix II of the Convention on International Trade in Endangered Species of Flora and Fauna (CITES). Seasonality chart prepared using eBird is also provided for each of the species.

*Journal of Threatened Taxa* (2017) 9 (8): 10585-10612

### **The ecology of Harwood's Francolin *Pternistis harwoodi* (Aves: Galliformes: Phasianidae) at Merhabete District, central highlands of Ethiopia: implications for conservation**

**Abadi Mehari Abrha, Habtu Kiros Nigus**











This paper investigates the abundance, density and habitat preference of Harwood's Francolin, and considers threats posed to this species at Merhabete District, Ethiopia. A total of 20 line transects ranging from 0.5–1.2 km, each 150–400 m apart, were placed in four study blocks. Habitat preferences were evaluated by digital elevation model (DEM) analysis and slope. Human pressures were also quantified based on circular plot placements along each line transect. Hence, distance sampling survey was used to count population data. The estimated population size and density were  $184 \pm 26.46$  birds and  $43.48 \pm 6.25$  birds/km<sup>2</sup>, respectively, with an overall encounter rate of 8.52 birds/km in Jema and Jara valleys. This species mainly preferred dry evergreen scrublands mixed with grassy, rock areas and dispersed acacia woodlands. However, based on stepwise regression model, the main threats to this species were burning, cutting, firewood collection and grazing. Generally, only cutting and firewood collection were the most important predictors that affected the focal species. This finding could be used to plan conservation of the species with the joint contribution of scientists, government and local communities.

*Journal of Threatened Taxa* (2017) 9 (9): 10633-10641



## User Forum

**Different facilities for users on [www.bnhsenvi.nic.in](http://www.bnhsenvi.nic.in) website are as follows:**

-  More than 19,000 bibliographical references on Indian birds.
-  Access to informative databases developed by the Centre. Databases include Endemic birds of India, Threatened birds of India, Important Bird Areas (IBAs), Birds in CITES, Marine birds of India, and others.
-  List of other ENVIS Centres on various subject areas for navigating through information on different subjects related to environment.
-  Link to the websites and journals pertaining to Avian Ecology.
-  Kid's Centre aimed towards school-going children provides interesting facts on birds.
-  All issues of BUCEROS, the Centre's newsletter, can be downloaded in PDF format.
-  Informative PowerPoint presentations on birds available for download.
-  Glossary has more than 300 ornithological terms explained.
-  Online query facility for users.
-  Contacts of eminent experts in ornithological studies.

## Request for Articles and Literature

Dear Readers,

- 1) You are welcome to contribute articles, photographs pertaining to avian ecology, to our newsletter.
- 2) To strengthen our databases we would request you to send us literature, which is not available on our website.

## Feedback and Queries

You can send your feedback pertaining to our website and BUCEROS newsletter via email or through our website. Any queries related to avian ecology can also be sent to [bnhs@envi.nic.in](mailto:bnhs@envi.nic.in) or [envi@bnhs.org](mailto:envi@bnhs.org).

## BOMBAY NATURAL HISTORY SOCIETY

Founded in 1883 for the study of natural history, the Bombay Natural History Society (BNHS) is now one of the premier research and conservation organizations in the country. The Society publishes a journal, the Journal of the Bombay Natural History Society, devoted to natural history and also has a popular publication, Hornbill, for the layman. It has also published a number of books on wildlife and nature. Its library has a large collection of books and scientific journals on wildlife and the environment. The Society's invaluable collection of bird, mammal, reptile, amphibian and insect specimens has been recognised as a National Heritage Collection.

Membership of the Society is open to individuals and institutions within India and abroad. For more details, please write to:

Membership Officer  
Bombay Natural History Society,  
Hornbill House,  
Shaheed Bhagat Singh Road,  
Mumbai 400 001. India.  
Email: [membership@bnhs.org](mailto:membership@bnhs.org)  
Tel: (91-22) 2282 1811

BUCEROS is an ENVIS (Environmental Information System) newsletter published thrice a year by the ENVIS Centre at the BNHS, sponsored by the Ministry of Environment, Forests and Climate Change, New Delhi.

The Centre collects, collates, stores, and disseminates information on Avian Ecology.

Address for correspondence

Project Coordinator  
ENVIS Centre,  
Bombay Natural History Society,  
Hornbill House, Shaheed Bhagat Singh Road,  
Mumbai 400 001. India.

Tel: (91-22) 22821811  
Fax: (91-22) 22837615  
Email: [bnhs@envis.nic.in](mailto:bnhs@envis.nic.in),  
[envis@bnhs.org](mailto:envis@bnhs.org)  
Website: [www.bnhsenvis.nic.in](http://www.bnhsenvis.nic.in)

DISCLAIMER: The views expressed in this newsletter are not necessarily those of the editors or of the BNHS.

Printed by Parth Enterprise, Goregaon, Mumbai 400063

Published by the Honorary Secretary for the Bombay Natural History Society, Hornbill House,  
Shaheed Bhagat Singh Road, Mumbai 400 001.